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Pragmatic Innovations in Post-Acute and Long-Term Care Medicine

Feasible new, practical products or approaches intended to improve outcomes or processes in post-acute or long-term care

COVID-19 Collaborative Model for an Academic Hospital and Long-Term Care Facilities



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ABSTRACT

The COVID-19 pandemic is devastating post-acute and long-term care (PA/LTC). As geriatricians practicing in PA/LTC and a regional academic medical center, we created this program for collaboration between academic medical centers and regional PA/LTC facilities. The mission of the Geriatric Engagement and Resource Integration in Post-Acute and Long-Term Care Facilities (GERI-PaL) program is to support optimal care of residents in PA/LTC facilities during the COVID-19 pandemic. There are 5 main components of our program: (1) Project ECHO; (2) nursing liaisons; (3) infection advisory consultation; (4) telemedicine consultation; and (5) resident social contact remote connections. Implementation of this program has had positive response from our local PA/LTC facilities. A key component of our program is our interprofessional team, which includes physicians and nursing, emergency response, and public health experts. With diverse professional backgrounds, our team members have created a new model for academic medical centers to collaborate with local PA/LTC facilities.

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Keywords: COVID-19, interprofessional, infection control, Project ECHO, nurse educator, telemedicine, subspecialty consultation

Problem and Significance

The COVID-19 pandemic is devastating for many post-acute and long-term care (PA/LTC) facilities, given the threat of quick and overwhelming spread of outbreaks.^{1–5} With implementation of social distancing orders, many communities have slowed the spread of infection. However, outbreaks remain dangerous where social distancing is not possible.^{6–8} As geriatricians who practice in PA/LTC and a regional academic medical center, we created the Geriatric Engagement and Resource Integration in Post-Acute and Long-Term Care Facilities (GERI-PaL) program to support optimal care to residents in post-acute and long-term care facilities during the COVID-19 pandemic.

Innovation

The GERI-PaL arms are detailed in [Figure 1](#). The prevention arm cultivates dialogue among an interprofessional academic clinical team (Geriatrics, Pulmonary, and Nursing), local government agencies including our local health department and emergency management, and local organizations related to prevention and treatment of COVID-19 in

patients in PA/LTC facilities. The program includes the following components: a daily community collaborative rounds (“Project ECHO COVID-19 in Nursing Homes”), nursing liaisons, infection advisory consultation, telemedicine consultation, and resident phone calls to provide social contact remote connections ([Table 1](#)).⁹

The response arm includes all components of prevention, as well as a targeted rapid response as detailed in [Table 2](#). These include an expansion of nursing liaisons and rapid implementation of telemedicine consult service with daily clinical rounds and team huddle. The response arm is activated for facilities experiencing an outbreak, in need of point-prevalence survey, or deemed high-risk (through self-identification or determined by local health department). The response team assesses facility needs to determine the best path for collaboration within 24 hours. The GERI-PaL team is available to assist the facility care team with daily discussions with stakeholders including facility clinical staff, facility administration, and corporate leadership, and to provide clinical consultative care. In these daily huddles, the team also assesses staffing and personal protective equipment (PPE) to ensure appropriate staffing to facilitate hospital transfers and on-site care, and can connect facility with local PPE resources as needed.

Implementation

GERI-PaL began on March 13, 2020, with facility-based Infection Advisory Consultation meetings. These meetings were quickly transitioned to web-based teleconferencing as the pandemic threat emerged. We met individually with 8 local facilities to provide general

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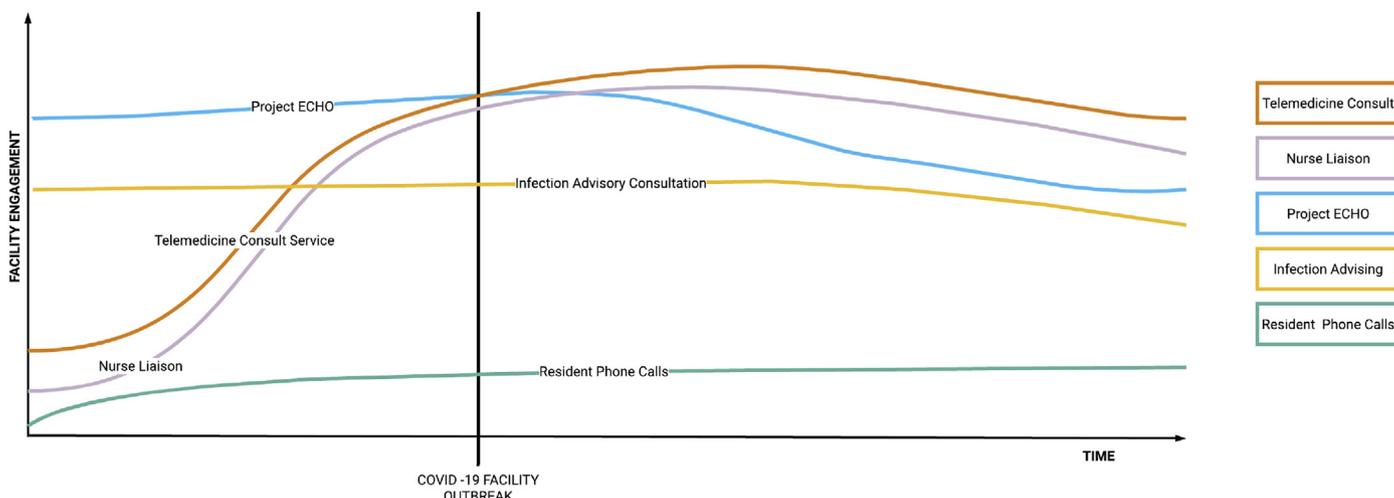


Fig. 1. GERI-PaL COVID-19 prevention and response program.

guidance on infection control policies, as recommended by AMDA, CDC, and CMS.^{10–12} The GERI-PaL team listened to facility-specific infection control concerns, staffing concerns, cohorting concerns, and challenges with ordering PPE from their standard suppliers. The

attendees included a facility administrator, a facility director of nursing, an infection control practitioner, a medical director, and an all-facility licensed independent practitioner (LIP), whereas other meetings were attended by only a facility medical director or LIP.

Table 1
GERI-PaL Prevention Outcomes, Rationale, and Implementation

GERI-PaL Prevention	Facilities Contacted	Facilities Participating	Rationale	Implementation
Project ECHO COVID-19 in Nursing Homes	77	35	<ul style="list-style-type: none"> Facilitated time for interaction increases staff collaboration Multiple sources of continuous updates and recommendations to review After initial broad regional outreach, transition to local initiative based on local agencies and resources 	<ul style="list-style-type: none"> Start by listening to facility needs and provide education based on needs assessment Synthesize information from various authoritative bodies to increase staff participation Facilities need help testing residents and getting PPE. Connect with local testing laboratories and local emergency management for allocation of PPE
Nursing liaison	35	13	<ul style="list-style-type: none"> Facility administrators and Directors of Nursing participate in facility-specific “office hours” and didactic learning Single point of contact for direct communication builds relationship with facility and integrates resources Streamlined source of information for technical assistance and guide for incorporating telehealth changes into clinical workflow 	<ul style="list-style-type: none"> Based on needs assessment and facility feedback, transition to weekly 1-h education sessions and “office hours” 4 d/wk Nurse liaison provides facility with one person who can coordinate with multiple local agencies and organizations for resource allocation Nursing liaison provides education to facility staff and training on telehealth
Infection advisory consultation	10	8	<ul style="list-style-type: none"> Facilities may be hesitant to openly discuss challenges with other facilities Ideally done with facility walk-through; may be limited because of the pandemic Each facility has unique challenges, often based on built environment; knowing facility is important to making recommendations 	<ul style="list-style-type: none"> Discuss specific facilities’ challenges with each facility individually Floor plans from emergency management can facilitate discussion if walkthrough not feasible Listen to and engage in facility-specific suggestions to accommodate best practices for infection control
Telemedicine consultation	12	5	<ul style="list-style-type: none"> Contracts must be agreed on with facility and medical center As contractual challenges arise, negotiations are required Multiple levels of negotiations are needed 	<ul style="list-style-type: none"> Contract negotiations have less urgency if no active cases or outbreak Must engage an active and knowledgeable legal team to assist with contract negotiations Legal negotiations likely beyond expertise of clinical team to facilitate
Resident social contact remote connections	10	2	<ul style="list-style-type: none"> Medical students actively volunteer Facility staff can recruit interested residents Facility residents with varied levels of engagement 	<ul style="list-style-type: none"> Assign medical student leaders to recruit other students Requires staff time and dedication to recruit Not all residents interested or able to participate

Table 2
GERI-Pal Response-Specific Outcomes, Rationale, and Implementation

GERI-Pal Response	Facilities Contacted	Facilities Implemented	Rationale	Implementation
Rapidly establishing telemedicine consultation	2	2	<ul style="list-style-type: none"> All parties recognize urgent nature of contract negotiation Facility LIP may not be available to be on-site to assess residents or provide care (due to illness, quarantine, or health risk) Complex decision making required for anticipated changes to clinical care and PPE prior to PPS Ensure appropriate technology and training on-site prior to clinical engagement Ensure appropriate training of facility staff with technology and new role of “tele presenter” 	<ul style="list-style-type: none"> Accelerate (48 h) contract approval with legal team; can initiate consultation during contract finalization phase Provides “on-site” care available to participating facility LIPs with limited or no ability to enter facility Facilitate cohorting plan for residents and staff Medical center telehealth technical team can deliver tablet computer with linked handheld examination kit and application to facility Nurse liaison trains facility “super user” in detail and other staff members as needed
Virtual daily rounding on facility residents	2	2	<ul style="list-style-type: none"> Dedicate time for all stakeholders to efficiently make clinical decisions Facility LIP participation is critical for implementation Consolidated timing supports LIP participation Ensure HIPAA-compliant, secured online platform for remote clinical discussion 	<ul style="list-style-type: none"> Facility staffing and vital sign gathering dictates timing of rounds Ensure resident primary LIP invited to actively participate in rounds—start with discussion of their patient(s) Facility dictates preferred way to contact LIPs
Updates of patients admitted to the hospital	2	2	<ul style="list-style-type: none"> Facility staff often not updated with hospital course of their residents Facility staff limited in communication with residents’ families 	<ul style="list-style-type: none"> HIPAA-compliant teleconferencing can be provided by academic medical center Telemedicine team serves as point of contact for facility communication with hospital Notify staff of in-hospital mortality
Facilitated transfer to hospital	2	2	<ul style="list-style-type: none"> Facility may have multiple residents needing hospital transfer in coordinated effort with transportation and accepting hospital Hospitals and EMS concerned with unpredictable surge 	<ul style="list-style-type: none"> Telemedicine consult team can assist with directly admitting patients if seen “virtually” by consulting physician who is also hospital physician Telemedicine consult team in continuous communication with facility about residents with clinical decline, to notify hospital with anticipated transfers in next 24–48 h
Facilitated transfer from hospital	2	2	<ul style="list-style-type: none"> Facility often not aware of upcoming hospital discharges until imminent Facilities with staffing limitation may limit number and timing of readmissions 	<ul style="list-style-type: none"> Telemedicine team follows daily hospital course to help anticipate potential discharge days prior Telemedicine team communicates when and number of residents facility can accept based on anticipated staffing

EMS, Emergency Medical Services; HIPAA, Health Insurance Portability and Accountability Act.

Parallel to these meetings, on March 16, 2020, a “telementoring” series was rapidly instituted using the Project ECHO model that leverages learning, training, and practice support to build a collaboration for health professionals.^{13,14} The Project ECHO team included a nurse practitioner, geriatrician, pulmonologist, clinical nurse leader, and nurse educator. The goal of the virtual meetings was to connect long-term care facility administrators and directors of nursing to assess facility needs for COVID-19 preparedness. In the response arm, we provided updated COVID-19 information, testing and treatment guidelines, and best practices in infection control. Participants in Project ECHO sessions shared their experiences and sought input from a network of peers and insight from experts on managing COVID-19–positive patients in the PA/LTC setting. Other frequent community participants include local county fire and rescue representation and regional long-term care ombudsman. These sessions were daily focused discussions and needs assessments regarding clinical information, PPE preparedness, and infection control, as well as education-based discussions. Four days a week this program was driven by facility needs (in a question and answer format similar to academic office hours). One session each week the program was a more formal didactic session given by an academic content expert on a topic of interest determined by the group.

From the relationships established via Project ECHO, academic nursing educators actively cultivated relationships with local PA/LTC nursing leaders to determine facility needs for assistance with PPE, improve care coordination between inpatient medical teams and facilities, and provide support to optimize telemedicine consultation processes.

In addition, a facility telemedicine consult service was established to provide academic pulmonary and critical care clinical support and recommendations for testing, monitoring, and treatment-in-place, and to facilitate hospital transfer to and return from the hospital as need arises. The telemedicine consultant communicates with a hospital medical communications center to directly admit acute patients, as well as to ensure key aspects of care coordination, such as transfer of accurate medication lists, code status documentation, and demographic information faxed to a centralized number for ease of facility-based staff. An allied geriatric consultation service, including Geriatric and Palliative care specialists, provides a parallel telemedicine consult service that supports complex medical conditions, goals of care discussions, and assistance with comfort care treatment when needed.

Through this program, our academic medical center is providing support for local facilities and staff and increasing collaboration and communication with local health departments and other agencies. We

also paired local medical student volunteers with facility residents for phone calls to connect socially and help combat social isolation.

Evaluation

For our Project ECHO daily discussions, our nurse liaison invited all 28 of our local facilities, as well as an additional 49 regional facilities. We connected with up to 25 facilities each week for needs assessment and education. Table 1 provides outcomes information and lessons learned for each of the prevention components as related to feasibility and adoption. Because of our collaboration with local emergency management and health department, we focused these discussions based on these localities instead of the large catchment area of our hospital. Of the local facilities with initial COVID-19 infection, 2 of the 3 facilities had participated in our prevention program and none of these facilities had sustained transmission or outbreak. The response outcomes and feasibility are listed in Table 2 based on our response to the 2 local facilities with outbreaks in which we have implemented our program. The mortality rate of each of these outbreaks was 12% and 19%, lower than the published mortality rate of 28%.²

Comment

We implemented our GERI-PaL program to support a collaborative care community between an academic medical center and local PA/LTC facilities. We present this as a practical approach intended to improve outcomes of COVID-19 in PA/LTC facilities. Components were well received among the participating facilities. The telemedicine consultation service was an integral component of our response arm and increased direct subspecialty care. In addition, our response daily huddle with all stakeholders in outbreak facilities streamlined communication for clinical and facility-based needs to activate response. A key innovation of the GERI-PaL model is our inter-professional team—including physicians, nurses, emergency response, and public health. The combined multidisciplinary expertise of this team has allowed us to more fully assess and adapt the program to meet real-time facility needs. Early intervention for facility outbreak is vital, especially to ensure appropriate planning and support before a facility point prevalence survey. Therefore, for other centers who may implement this program, we would recommend broad and ongoing outreach to facilities to expand impact and sustain facility involvement.

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The pragmatic innovation described in this article may need to be modified for use by others; in addition, strong evidence does not yet exist regarding efficacy or effectiveness. Therefore, successful implementation and outcomes cannot be assured. When necessary, administrative and legal review conducted with due diligence may be appropriate before implementing a pragmatic innovation.